Water Quality Analysis Simulation Program (WASP6)
WORKSHOP

Target Audience: This workshop is intended for individuals with experience in data analysis modeling to introduce WASP6, the enhanced Windows version of the USEPA Water Quality Analysis Simulation Program (WASP). We welcome participation from our States, Regional experts, local universities, and Tribes, as well as USEPA representatives.

WASP6 has been developed to aid modelers in the implementation of WASP. WASP6 contains 1) a user-friendly Windows-based interface, 2) a preprocessor to assist modelers in the processing of data into a format that can be used in WASP, 3) high-speed WASP eutrophication and organic chemical model processors, and 4) a graphical post-processor for the viewing of WASP results and comparison to observed field data. With WASP6, model execution can be performed up to ten times faster than the previous USEPA DOS version of WASP. Nonetheless, WASP6 uses the same algorithms to solve water quality problems as those used in the DOS version of WASP.

WASP6 is used routinely throughout the United States in the development TMDLs and waste load allocations. The model contains algorithms for conducting: 1) Eutrophication/Conventional Pollutants, 2) Organic Chemicals/Simple Metals, 3) Mercury, 4) Temperature, Fecal Coliforms, Conservative Pollutants.

Dates, Location, and Logistics

Dates	Location
June 9 - 13, 2003	**EPA Region 5** **77 West Jackson Boulevard** **Chicago, Illinois**

This workshop will be free. We are planning on having approximately 50 people in the class. Participants attending the WASP training course will be required to bring a laptop computer with CD-ROM capability or make arrangements to share a computer with someone. The laptop computer will be used for running the model and viewing the course materials. Each participant will receive a CD-ROM with the course materials, WASP6.1, model installation/Documentation and hands-on example files.

Instructors

Tim Wool is with US EPA Region 4 as Senior Water Quality Modeler in the Standards, Monitoring and TMDL Branch. Tim has over 15 years experience in the development and application of WASP. Tim routinely uses WASP for the development of TMDLs.

Robert Ambrose is with EPA ORD-NERL/ERD-Athens in the Processes and Modeling Branch. Bob has over 20 years experience in the development and application of WASP.

How to Register

If you are interested in attending this workshop, please send an e-mail to Hattie Harris at harris.hattie@epa.gov or call (312) 886-6108. There is no charge for the workshop; attendees are responsible for their travel and lodging.

For additional information on this workshop and who should attend, please contact Simon Manoyan at manoyan.simon@epa.gov or call (312) 353-2681.

Accommodations

Attendees are responsible for making their own travel and lodging arrangements.

Attendees may choose to stay at the Union League Club of Chicago (also the "Club"), 65 West Jackson Boulevard, which is located next to the EPA Region 5 Metcalfe Building facility. Hotel rooms have been blocked for WASP conference attendees. **Guests should call the Club no later than Friday, May 16, 2003** in order to make reservations in reference to the "EPA Water Quality Analysis Program". Guests must mention the meeting name when making a reservation. Rooms are at the special rate of $129.00/night inclusive ($111.21 + 16% per night surcharge) for Federal Employees. Rooms for State Employees are at the special rate of $109.00/night inclusive ($93.96 + 16% per night surcharge). Complimentary Continental Breakfast is also included.

The Union League Club of Chicago abides by a dress code. **All guests must comply with the dress code policy.** For information on dress code requirements, directions, parking, and transportation, please visit the Club website at:

www.ulcc.org

or

Call (312) 427-7800

For a full list of hotels within walking distance from the EPA Region 5 Metcalfe Building facility, please visit our Region 5 Visitor's Guide Hotel Listing at:

www.epa.gov/region5/visitor/hotels.htm

Agenda

Monday, June 9, 2003
Registration/Introduction to Hydrodynamics

12:00 - 1:00
- Course Registration

1:00 - 3:00
- Introduction to Hydrodynamics
- Hydraulics/Hydrodynamics in Streams & Rivers
- Hydrodynamics in Estuaries

3:00 - 3:15
- Break

3:15 - 5:00
- Data Requirements
- Illustrative Examples
  - One Dimensional
  - Two Dimensional
  - Three Dimensional
- Issues Linking Hydrodynamic Models with WASP

Tuesday, June 10, 2003
Introduction to WASP

8:30 - 10:00
- Introduction to Modeling with WASP
- Model Segmentation
- Loads and Boundaries

10:00 - 10:15
- Break

10:15-12:00
- Advection
- Dispersion
- Sediment/Particulate Transport

12:00 - 1:15
- Lunch *(on your own)*

1:15 - 3:00
- Overview of the WASP6 Modeling Environment

(Tuesday Schedule Continued)

3:00 - 3:15
- Break

3:15 - 5:00
- Development of a Conventional Pollutant Riverine TMDL
  - Model Segmentation
  - Flow Determination
  - Water Quality Boundary Conditions

Wednesday, June 11, 2003
Eutrophication

8:30 - 10:00
- Introduction to Eutrophication
- DO-BOD Interactions

10:00 - 10:15
- Break

10:15 - 12:00
- Algal Growth Kinetics
- Eutrophication & Complex Nutrient Cycling

12:00 - 1:15
- Lunch *(on your own)*

1:15 - 3:00
- Continued Hands-On TMDL Development
  - Dissolved Oxygen

3:00 - 3:15
- Break

3:15 - 5:00
- Continued Hands-On TMDL Development
  - Nutrient Enrichment
  - Others?

Thursday, June 12, 2003
Toxicants

8:30 - 10:00
- Introduction to Toxicants
- Sorption

(Thursday Schedule Continued, 8:30-10:00 A.M.)

- Photolysis
- Volatilization

10:00 - 10:15

- Break

10:15 -12:00

- Biodegradation
- Ionization
- Hydrolysis
- Reaction Products
- Issues Relating to Bioaccumulation

12:00 - 1:15

- Lunch *(on your own)*

1:15 - 3:00

- Illustrative Examples
  - Mercury Cycling

3:00 - 3:15

- Break

3:15 - 5:00

- Illustrative Examples
  - Ammonia Toxicity
- Hands-on Experience

Friday, June 13, 2003
TMDL Development

8:30 - 12:00

- Continued Hands-On TMDL Development
- Site Specific Application Questions for using WASP in TMDL Development
  - Participants are invited to bring data to develop WASP input datasets.

12:00

- Dismissal